25. The radiation source of claim 23, wherein the container is made from a highly flexible material.

26. The radiation source of claim 25, wherein said flexible material is selected from the group consisting of Ni-Ti-alloy and aluminum alloy

27. The radiation source of claim 26, wherein said flexible material is selected from the group consisting of Nitinol and Tinal alloy BB.

28. The radiation source of claim 23, wherein the one or more deflection site(s) comprise perforation patterns.

29. The radiation source as in claim 28, wherein said patterns are laser perforations of the container.

30. The radiation source of claim 23, wherein the one or more deflection site(s) comprise multiple helical openings in the tube.

31. The radiation source of claim 23, wherein the seeds comprise rounded or spherical end caps on one or both ends.

32. The radiation source of claim 23, wherein the seeds are separated from each other by at least one spacer.

33. The radiation source of claim 32, wherein said spacer is in form of a sphere.

34. The radiation source of claim 23, wherein the seeds are spaced from each other and fixed to the inner wall of the container.

35. The radiation source of claim 23, wherein said means for containment is a metallic capsule.

36. The radiation source of claim 23, wherein the radiation emitting element comprises any α-, β- and/or γ-emitting substance.

37. The radiation source of claim 36, wherein the radiation emitting element comprises one or more radioactive materials selected from the group consisting of Cs^{137}, Co^{57}, Sr^{89}, Y^{90}, Au^{198}, Pd^{103}, Se^{75}, Sr^{90}, Ru^{106}, P^{32}, Ir^{192}, Re^{188}, W^{188} and I^{125}.

38. An apparatus for endovascular radiation treatment, comprising an elongated catheter having a proximal end portion, a distal end portion and a single lumen for receiving a radiation source, optionally a guide wire and a second lumen therefore, and a radiation source which comprises one or more seeds (treating elements) comprising a radiation emitting element and means for containment of said radiation emitting element, wherein said seeds are in an elongated container having at least one deflection site.

39. The apparatus of claim 38, wherein the radiation source comprises a radiation emitting element comprising one or more radioactive materials selected from the group consisting of Cs^{137}, Co^{57}, Sr^{89}, Y^{90}, Au^{198}, Pd^{103}, Se^{75}, Sr^{90},

Ru^{106}, P^{32}, Ir^{192}, Re^{188}, W^{188} and I^{125} contained in a container made from a highly flexible material.

40. The apparatus of claim 38, further comprising a containment vessel for radiation protection.

41. The apparatus of claim 38, further comprising a magnetic means.

42. The apparatus of claim 38, further comprising an x-ray fluoroscopy device.

43. A method for endovascular radiation treatment comprising the steps of

(a) directing an elongated catheter, having a proximal end portion, a distal end portion and a lumen extending therebetween for receiving a radiation source, to the selected site to be treated preferable by way of a guide wire in a separate lumen;

(b) introducing a radiation source into the catheter at its proximal end portion, which radiation source comprises one or more seeds (treating elements), wherein said seeds are in an elongated container having at least one deflection site;

(c) moving said radiation source to said distal end portion preferably by way of a transfer wire;

(d) maintaining said radiation source at said distal end portion for a determined period of time; and

(e) retracting said radiation source to the proximal end portion preferably by use of a transfer wire.

44. The method of claim 43, wherein moving and/or retracting in steps (c) and/or (e) is achieved by pushing or pulling the radiation source.

45. The method of claim 43, wherein said movement in step (c) is achieved by pushing and said movement in step (e) is achieved by pulling said radiation source.

46. The method of claim 43, wherein the radiation source is linked to a transfer wire at its proximal end and moving in step (c) occurs by pushing the transfer wire into the catheter and retracting in step (e) occurs by pulling the transfer wire out of the catheter.

47. The method of claim 43, wherein a radiation source comprising a magnetic elongated container is used and movement in steps (c) and/or (e) is achieved by magnetically pushing and/or pulling the radiation source using a transfer wire comprising a magnet or using an external magnetic means.

48. The method of claim 43, wherein the radiation source comprises a radiation emitting element comprising one or more radioactive materials selected from the group consisting of Cs^{137}, Co^{57}, Sr^{89}, Y^{90}, Au^{198}, Pd^{103}, Se^{75}, Sr^{90}, Ru^{106}, P^{32}, Ir^{192}, Re^{188}, W^{188} and I^{125} contained in a container made from a highly flexible material.

REMARKS

The claims have been amended in order to eliminate multiple dependent claims and claims improperly depending from multiple dependent claims, and to otherwise conform the claims to U.S.